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ABSTRACT

Several aspects of gender concept development were investigated in 60 children of mixed socioeconomic background ranging in age from three to six years. Tasks were designed to assess gender constancy, knowledge of sex-stereotypes, differential memory and preference for sex-typed material, and gender categorization. Cognitive maturity was assessed with a conservation task and total recall on the memory task. Performance improved linearly with age on the gender concepts; individual children of both sexes learned the gender concepts in the same sequence; and cognitive maturity measures were positively related to performance on the gender concept tasks. Implications for self-socialization of sex-typing are seen in the development of gender concepts in young children. (Author)

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Development of Gender Concepts in Preschool Children

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Development of Gender Concepts in Preschool Children

The search for more complete explanations of the psychological and behavioral differences between males and females has gained social significance during the past several years as a result of the movement for increased participation by women in all aspects of society. Recent reviews of early sex role development and sex differences (Maccoby & Jacklin, 1974; Mussen, 1969) have concluded that none of the current theoretical positions provides an adequate account of the processes by which individuals develop the characteristics defined by their culture as appropriate for their sex. Maccoby and Jacklin concluded that processes of "self-socialization" must be incorporated into any account of sex role acquisition. Though they state that these self-socialization processes have not been clearly delineated, they believe, with Kohlberg (1966), that the child's developing concept of her/his own sex and the behaviors and other attributes associated with it serve to organize the child's attempts to adopt behaviors that she/he believes are appropriate and will be approved by parents and others in her/his social world. The present study follows from several investigations which have attempted to discover what young children know about gender and sex roles and how this knowledge may be related to both their sex-typed behaviors and their cognitive development in general.

Though some data exist on certain gender concepts in preschool children, very little is known about the interrelationships among the various kinds of concepts. The purpose of the present study was to

assessed by asking the children if they were a boy or a girl, whether they were a little boy or a little girl when they were a baby, whether they would be a man or woman when they grow up, and if they could be the opposite sex if they wanted to be. Gender consistency was assessed by asking the children if they would be the opposite sex if they wore clothes, or played games associated with the opposite sex.

Item memory. Following Nadelman's (1970, 1974) procedure, 12 index cards with pictures of 6 stereotypically male and 6 stereotypically female toys and other articles were presented one at a time for approximately three seconds each. The child was asked to name each item and the examiner repeated the child's name for the item. For those items which the child did not know or named incorrectly, the examiner told the child the name of the item and then asked her/him to say it. After the entire set had been presented, the child was asked to say as many of the items as she/he could remember. Differential memory was determined by calculating the proportion of same-sex items each child recalled.

Item preference. Pictures of 25 common objects mounted on index cards were presented to the child five at a time. The objects had been scaled by a group of young adults in a preliminary study according to the proportion of the time the item is used by males and females on a 5-point scale. Each set of five items consisted of one representative from each of the five scale points. As each

card was placed in front of the child, she/he was asked to name it. The child was then asked to indicate which of the five she/he liked best in each set. After the five sets had been presented, the child's choices were displayed together and the child was asked to choose her/his very most favorite item.

Knowledge of stereotypes: Attributes. An adaptation of the procedure used by Williams, Bennett, and Best (1975) was used. Ten brief stories depicting various personality traits were read to the children, and they were asked to point to the picture of the person (a boy or a girl) that the story was about. The stereotypically correct responses were determined in a manner similar to that used for the objects described above. Five stories depicted stereotypically male traits (e.g., strong, athletic) and five stories depicted stereotypically female traits (e.g., sympathetic, soft-spoken).

Knowledge of stereotypes: Sorting objects. The same 25 picture cards used in the item preference test were presented to the children one at a time in random order. Three boxes were identified with pictures of two boys, two girls, and a boy and a girl. The child was asked to put the card in the box showing who uses the item most of the time. The third box (with the boy and the girl) was indicated as the one to use if both boys and girls use the

item equally often.

Gender categorization. The extent to which preschoolers group adults and children by sex rather than by age or size was assessed by asking the children to choose which of two people (e.g., a man or a girl) was the most like a standard (e.g., a woman) picture. The child was presented with eight 8" x 10" cards with three pictures mounted on each, selected from pictures of a man, a woman, a boy, and a girl. Each triad was constructed so that the child was forced to choose on the basis of either age or sex similarity. Each of the four possible combinations so constructed was presented twice, with the sex-based choice once on the right and once on the left in random order.

Conservation. The Concept Assessment Kit--Conservation (Goldschmid & Bentler, 1968) was administered on the second testing day.

Results

Gender Concept Tasks

Mean performance on the gender concept tasks increased with age, except for gender consistency, which decreased with age. The total scores on each of the gender concept tasks and the cognitive maturity measures were subjected to a 2 x 6 multivariate analysis of variance on the Sex and Age factors, with tests for linear and quadratic trends on the Age factor. The multivariate tests revealed significant effects for the linear component of the

Age factor and for the Sex factor (see Table 1). The univariate tests confirmed that performance increased linearly with age on six of the seven gender concept measures. The only exception was gender consistency, which decreased with age. A marked ceiling effect resulted in a significant quadratic component for gender stability. Quadratic trends for the other measures were not significant.

Sex differences were obtained on three of the tasks. On the memory test, boys recalled proportionately more sex-typed items than did girls. However, male items were recalled more than were female items by children of both sexes, $t(59) = 2.35$, $p = .022$, making interpretation of the sex difference equivocal. The sex difference in performance on the categorization task resulted from the boys' categorizing more consistently on the basis of sex than did the girls. In the item preference test, girls selected more extremely sex-typed items than did the boys. However, when the two sex-typed values at each end of the scale were combined, the difference between the boys' and the girls' sex-typed preference disappeared. There were no significant sex by age interactions.

Cognitive Maturity

The total scores on the conservation test were very low. The analysis of variance (Table 1) on these scores revealed a significant linear trend and a marginally significant quadratic component

which was due to a sharp increase in the mean performance of the children in the two oldest age groups. The mean number of items recalled on the memory test served as a supplementary measure of cognitive maturity. The analysis of variance on these data revealed a highly significant positive linear trend for age. Sex and sex by age interaction effects were not significant for either cognitive maturity measure.

Relationships Among the Gender Concepts

A Guttman scale analysis was performed on the six gender concept tests to determine the extent to which a child who has passed a given test also passed each of the easier tests. This analysis revealed that individual children do master the concepts in generally the same sequence (coefficient of reproducibility = .89 for girls and .79 for boys; minimum marginal reproducibility = .71 for both sexes.) The criterion adopted to consider a test mastered by an age group was that at least half of the children in the age group, as well as those in older age groups, must have performed significantly above the chance level on the test. The easiest task was gender stability, mastered by 42 - 47 months, while object sorting was mastered by 54 - 59 months. The medium difficulty tasks were item preference and sex categorization, which were mastered as 66 - 71 months by girls but not mastered by boys in any age group. The most difficult tasks were know-

ledge of attribute stereotypes and differential recall of sex-typed items, neither of which was mastered by even the oldest group of either sex.

Relationships Between Gender Concepts and Cognitive Maturity

The correlations of age in months, conservation, and total recall with the gender concept measures are shown separately in Table 2. As can be seen, age and total recall are positively correlated with most of the measures, while conservation is correlated with four measures--all except gender constancy and item preferences--for the girls and with none of the gender concepts for the boys.

Discussion

The principal hypotheses of this investigation were supported. Performance on the gender concepts improved linearly between the ages of three and six, with the sole exception of gender consistency, which declined with age. Meaningful sex differences occurred only in sex categorization. The hypothesis that there is a reliable sequence of acquisition among the concepts was supported by the results of the Guttman scale analyses. Gender stability was the first concept learned, followed by object sorting, item preference, and sex categorization. The last concepts learned were knowledge of stereotypic attributes and differential recall of sex-typed items. Boys and girls mastered the tasks in the same order.

The relationshp between performance on the gender concept tasks and conservation was not as strong as had been hoped. Conservation performance was so low and variance so restricted that it was related to few of the gender concepts for the girls and none for the boys, none of whom conserved. Total recall, though also rather low, improved dramatically and linearly with age and was positively related to performance on most of the gender concepts for both boys and girls. This lends support to the notion that cognitive maturity does contribute to the mastery of successively more complex gender concepts.

The present study relates closely to Maccoby and Jacklin's (1974) position that self-socialization must play a substantial role in the child's development of sex-role behaviors. According to the cognitive-developmental theory, the child first learns a self-label, and then begins to positively value things that are associated with that label. This leads to the adoption of preferences and behaviors that are in accord with the child's concepts of what is appropriate. The child also organizes her/his attempts to imitate adult behavior according to the gender concepts she/he has at any given time. Presumably, social learning processes contribute to the selection of behaviors to be imitated and may also contribute to the concepts that the child acquires.

It seems likely that both general information and vocabulary development as well as more complex cognitive growth may be related to gender concept development in young children. A child may learn associations of objects, activities, and attributes with one or the other sex by simple associative processes, but gender constancy and the broadening of the child's gender label to include the entire group of people of like sex may require more sophisticated processes similar to Piagetian conservation and class inclusion, respectively. A more extensive examination of the kinds of cognitive growth associated with gender concept development is expected to clarify these relationships.

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Table 1

Multivariate Analysis of Variance Summary

	Effect[a]					
	Age Linear		Age Quadratic		Sex	
	F	p	F	p	F	p
Multivariate tests[b]	15.84	.001	1.67	ns	3.68	.002
Univariate tests						
Gender Concepts						
Gender Constancy	29.05	.001	4.19	.046	<1	ns
Gender Consistency[c]	8.05	.007	1.56	ns	<1	ns
Differential Recall	9.43	.004	<1	ns	5.62	.022
Object Preferences	9.44	.003	<1	ns	16.21	.001
Knowledge of Attributes	19.00	.001	1.49	ns	<1	ns
Object Sorting	48.75	.001	<1	ns	<1	ns
Sex Categorization	13.68	.001	3.91	.054	4.65	.036
Cognitive Maturity						
Conservation	7.00	.011	2.99	.090	1.80	ns
Total Recall	44.35	.001	<1	ns	<1	ns

[a] Degrees of Freedom = 1,48 for each effect.

[b] Wilks' lambda criterion used for each test.

[c] Trend declines with age.

Table 2

Correlations Among Measures [a,b]

Variable	1	2	3	4	5	6	7	8	9
1 Age in Months	-	.475	.574	.534	.468	.221	.602	.701	.619
2 Conservation	.133	-	.532	.210	.323	.196	.328	.362	.495
3 Total Recall	.753	.112	-	.194	.454	.421	.320	.551	.503
4 Constancy	.579	-.103	.400	-	.246	.101	.324	.383	.264
5 Diff. Recall	.265	-.237	.185	.408	-	.064	.182	.364	.521
6 Preferences	.530	.047	.384	.258	.325	-	.230	.138	.143
7 Attributes	.436	-.132	.461	.256	.058	.409	-	.540	.419
8 Object Sorting	.652	-.320	.578	.428	.511	.438	.377	-	.541
9 Categorization	.114	-.107	.094	.326	.007	.109	-.135	.206	-

[a] Girls' coefficients are above the diagonal, boys' are below the diagonal.

[b] For each coefficient, n = 30. Probabilities associated with the values are as follows:

$\lvert r \rvert \geq$	$p \leq$
.306	.05
.433	.01
.479	.005
.572	.001